

Minnesota Public Utilities Commission

Staff Briefing Papers

Meeting Date: **September 9, 2004** Agenda Item #____

Company: Mankato Energy Center

Docket No. IP-6345/CN-03-1884
In the Matter of the Application of Mankato Energy Center, LLC, a Wholly-Owned Subsidiary of Calpine Corporation, for a Certificate of Need for a Large Electric Generating Facility

Issue(s): Should the Commission grant a certificate of need for construction of the portion of the plant not exempt from the process, including the transmission lines directly associated with the plant that are necessary to interconnect the plant to the transmission system? Should the Commission require any modifications of the facility or impose any conditions?

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Relevant Documents

Minn. Stat. §§ 216B.2421, 216B.2422, and 216B.243

Minn. Rules, parts 7849.0010 to 7849.0400

Commission's ORDER GRANTING EXEMPTIONS FROM FILING REQUIREMENTS AND LIMITING SCOPE, issued February 6, 2004 (Appendix A in the March 2, 2004 Application)

Mankato Energy Center's Certificate of Need Application (Hearing Exhibit 1, non-public copy, and 1A, public copy), submitted March 2, 2004 #18
(Relevant documents continued on the next page.)

The attached materials are workpapers of the Commission Staff. They are intended for use by the Public Utilities Commission and are based upon information already in the record unless otherwise noted.

This document can be made available in alternative formats (i.e., large print or audio tape) by calling (651) 297-4596 (voice), (651) 297-1200 (TTY), or 1-800-627-3529 (TTY relay service).

Relevant Document (continued)

MEC's Supplemental Information (Hearing Exhibit 2), filed March 29, 2004 #31
Proposed Findings of Fact, Conclusions of Law and Recommendation, rec. Aug. 4, 2004 . . . #62
ALJ's Findings of Fact, Conclusions of Law and Recommendation, rec. Aug. 20, 2004 #64
Exceptions – Expected but not available as of September 1, 2004

Statement of the Issue

Should the Public Utilities Commission (Commission) grant a certificate of need for construction of the portion of the plant not exempt from the process, including the transmission lines directly associated with the plant that are necessary to interconnect the plant to the transmission system? Should the Commission require any modifications of the facility or impose any conditions?

Background Information

On November 25, 2003, Calpine Corporation (Calpine) filed a request for exemption from certain certificate of need filing requirements and for an order establishing the scope of the application. The Company indicated its intent to file a certificate of need application for permission to construct a natural gas-fired combined cycle electric generating facility at a site near Mankato, Minnesota. The generating facility would be a large energy facility as defined by Minn. Stat. § 216B.2421, subd. 2 (1) (2002).

On February 6, 2004, the Commission issued its ORDER GRANTING EXEMPTIONS FROM FILING REQUIREMENTS AND LIMITING SCOPE. In that Order, the Commission approved the Company's request with certain additional comments.

On March 2, 2004 Mankato Energy Center, LLC (MEC or the Applicant), a wholly-owned subsidiary of Calpine, submitted its certificate of need application for the portion of the plant not covered by its planned contract with Xcel Energy.¹

On March 29, 2004 MEC filed supplementary material intended to complete the application.

On April 6, 2004 the Commission issued its ORDER FINDING APPLICATION SUBSTANTIALLY COMPLETE CONTINGENT UPON ADDITIONAL FILING AND REFERRING MATTER TO THE OFFICE OF ADMINISTRATIVE HEARINGS (Hearing Exhibit 3) and its NOTICE AND ORDER FOR HEARING. In the former Order, the

¹Calpine was selected in a competitive bidding process for approximately 365 megawatts of capacity. That portion of the Mankato Energy Center project is exempt from the certificate of need process under Minn. Stat. § 216B.2422, subd. 5 (b).

Commission authorized joint need and siting proceedings under Minn. Stat. § 216B.243, subd. 4, noting that joint proceedings likely would be more efficient than separate proceedings.² On May 20, 2004, the EQB adopted a resolution authorizing joint proceedings.

Public and evidentiary hearings were held in Mankato on July 12 and 13, 2004.

On August 4, 2004, the Commission received a copy of Proposed Findings of Fact, Conclusions of Law and Recommendation. The cover letter indicated that input from Xcel Energy and Northern Natural Gas was incorporated into the document. The cover letter also stated that the Department of Commerce (the Department) was accorded an opportunity to provide input and that the Department did not oppose the document as filed with the Administrative Law Judge (ALJ).

On August 20, 2004, ALJ Allan W. Klein filed his Findings of Fact, Conclusions of Law and Recommendation.

No exceptions were received as of the completion date of the briefing papers, but the period for filing exceptions ends on September 7, 2004.³

Description of the Mankato Energy Center Project

The Mankato Energy Center project is a combined-cycle power plant capable of producing approximately 655 megawatts (MW) of power during the summer and 730 MW during the winter (at ambient conditions). Natural gas would be the fuel of choice, with low-sulfur distillate oil as a back-up fuel. The facility would include two combustion turbine generators, two heat recovery steam generators equipped with duct burners, one steam turbine with an associated heat rejection system, a multi-cell cooling tower, and various other equipment.

According to the Applicant, the portion of the facility that is subject to Commission approval in this proceeding includes one combustion turbine generator, one heat recovery steam generator, one steam turbine generator, one multi-cell evaporative cooling tower, and various other machinery and equipment required for a safe and efficient power plant.⁴ The Company noted that the natural gas pipeline connection and the water pipelines would be sized slightly larger than if the facility were built only to satisfy the requirements of the purchased power agreement

²The Commission also noted that the EQB similarly would have to approve the use of a joint need and siting proceeding.

³The end of the 15-day period actually is Saturday, September 4, 2004, which pushes the deadline to the day after Labor Day.

⁴According to the application, this portion of the facility could produce 325 megawatts of power during ambient summer conditions and a somewhat higher amount during ambient winter conditions.

(PPA) with Xcel Energy.⁵

The proposed 25-acre site is north of the Mankato city limits within Lime Township. The site is approximately 3.2 miles from the Northern Natural Gas pipeline and approximately 1,000 feet from the Wilmarth Substation. The Company plans that power and energy would be available from the facility in the 2006-2007 time frame.

The Report of the Administrative Law Judge

The ALJ noted that this was the first joint hearing held for the need and siting processes. He indicated that, from his point of view, the process worked well and encouraged the agencies to consider further use of joint hearings.

The ALJ's Report therefore is also the first one to contain findings, conclusions and recommendations for both processes. The pertinent findings and conclusions relating directly to need include Findings 39-155 and Conclusions 1, 3, and 5-17. Specific conclusions required by statute or rule include Conclusions 9, 10, and 13-16.

Findings 88-98 specifically relate to the use of natural gas as the main fuel for the facility.

Considering all of his findings and conclusions, the ALJ issued the following recommendation regarding the certificate of need for the non-exempt portion of the proposed project:

That a Certificate of Need for a large electric power generating plant and the transmission lines directly associated with the plant that are necessary to interconnect the plant to the transmission system be issued to Applicant Mankato Energy, LLC.

Staff Discussion

The Possible Use of a Biodiesel Blend

Several letters from the public stated or implied that the record analysis of a biodiesel blend option was insufficient in the existing record.⁶

Staff notes that the statutes provide for a renewable preference. The Commission may not certify

⁵The contract with Xcel Energy was approved earlier by the Commission. See the ORDER APPROVING POWER PURCHASE AGREEMENT, issued August 17, 2004 in Docket No. E-002/M-04-451.

⁶As indicated in the ALJ's Report at pages 46-47, this information was provided to the ALJ late in the process and therefore was not fully tested during the hearing process.

a nonrenewable alternative "unless the applicant for the certificate has demonstrated to the commission's satisfaction that it has explored the possibility of generating power by means of renewable energy sources and has demonstrated that the alternative selected is less expensive (including environmental costs) than the power generated by a renewable energy source." Staff believes it is clear from the statutes that biodiesel fuel meets the definition of "renewable energy source."

However, staff also points out the following:

- The proposed project is part of a larger project, much of which is exempt from the need process. (Minn. Stat. § 216B.2422, subd. 5 (b)).
- The certificate of need process considers size (e.g., number of megawatts), general type (e.g., coal-fired facility, combustion turbine, or combined cycle facility), and timing (e.g., in-service date). At best, fuel type is a component of a particular technology type; it is not in and of itself a separate alternative.
- In the Mankato Energy Center, biodiesel would be a substitute only for the infrequent use of fuel oil.
- The record indicates that biodiesel fuel is likely to be more expensive than fuel oil (especially if it has to be transported over long distances), that there are no current production facilities in Minnesota (although this likely will change soon), and that biodiesel will degrade if stored for an extended period of time.⁷

Staff also notes that the evidentiary basis for using biodiesel as a backup fuel is not as strong as might be desirable. Some support is in comments received by the EQB during the scoping process for the environmental assessment document. Most of the other support rests in public letters received too late to be fully tested during the hearing process. No formal party advanced this option during the hearing. Minn. Rules, part 7849.0110 indicates that the Commission "shall consider only those alternatives . . . for which there exists substantial evidence on the record with respect to each of the criteria listed in part 7849.0120."

While the requirement in Minn. Rules, part 7849.0110 may be subject to some interpretation, staff points out that the Commission has responsibilities to ensure that electric service is safe, adequate, reliable, efficient, and reasonably priced. Minn. Stat. §§ 216B.01, 216B.03, and 216B.04. In other words, the reason for the requirement is to recognize that the Commission should not unreasonably jeopardize standards of service in the hope that further record development might yield an alternative having some merit.

⁷See Exhibit 36 (Environmental Assessment) at page 43, Exhibit 45 (Testimony of Kent Morton) at pages 33-34, Exhibit 66 (Testimony of Matt Lacey) at pages 29-30, the letter from the Minnesota Soybean Growers Association, and the Transcript Volume 1A at pages 44, 46-47, 109-110, and 112.

Staff believes that any argument that the Commission may not certify the proposed facility until a detailed cost analysis is completed is too extreme and limiting, given the overall public interest. That is, staff believes the Commission could use the record evidence to conclude that it would not be reasonable at this time to order MEC to use biodiesel as a backup fuel, either in its pure form or in a blend with fuel oil.

Staff believes these comments are consistent with the findings and conclusions of the ALJ. See, for example, Findings 99-100, 118, 137 and 139, Conclusion 15, and the Memorandum on pages 46-47.

Staff further notes that a certificate of need is primarily a construction permit. That is, with rare exceptions, the decision-maker does not set operating guidelines for a generating facility at the time of certification. Staff is uncertain whether the Commission could order the Applicant to switch from fuel oil to a biodiesel blend at some point in the future. However, staff believes the Commission could request that MEC continue to evaluate the technical feasibility and economic viability of switching to the use of biodiesel or a biodiesel blend at some point in the future.

Corrections to or Clarifications of the ALJ's Findings

On the whole, the ALJ's findings and conclusions appear to be comprehensive and reflective of the record. However, staff believes a small number of changes would improve the findings.

On August 31, 2004, attorneys for the Applicant and the Department indicated to Commission staff by telephone that they have concerns about a small number of the ALJ's findings.

The Department's concerns relate to several sentences describing the effect of the proposed facility on reserve margins and reliability. While the Commission will have to look at the exceptions when they come in, staff believes that a small number of language changes in the areas identified would be appropriate.

As related to staff, MEC's concerns relate to wastewater treatment and wholesale sales to utilities. Plans for wastewater treatment have been firmed up with the City of Mankato since the hearings, and a few changes in the findings would better reflect the current plans. Also, the Applicant believes the last sentence of Finding 75, relating to possible sales to utilities, is misleading and/or inaccurate. Again, the suggested changes in these areas will have to be evaluated when they come in, but staff believes minor changes also would be appropriate to reflect MEC's concerns.

Staff has two other minor comments related to the findings of the ALJ.

First, in Finding 46, the statutory reference should be § 216B.2421, subd. 2 (1).

Second, while the meaning of Finding 148 probably is obvious to anyone familiar with the record, staff believes the finding would be clarified if the following text were substituted for the second parenthetical phrase:

(combined cycle units are more fuel-efficient and permit the use of additional control equipment such as Selective Catalytic Reduction systems).

There may be other minor typographical errors or other types of errors in the ALJ's Report, but staff is unaware of any.

The Environmental Assessment

In accordance with its rules, the EQB Staff prepared an Environmental Assessment covering both certificate of need and siting alternatives. In this proceeding, the Environmental Assessment is Hearing Exhibit 36. Under its rules, as part of the process of creating the environmental review document, the EQB must conduct a scoping process, which leads to a scoping decision by the EQB Chair.

The EQB rules provide that the Commission shall, at the time of the certificate of need decision, determine whether the environmental review document and the record created adequately address the issues identified by the EQB Chair in the scoping decision.

As a result of these requirements, staff has included some language regarding the Environmental Assessment in the decision option to certify the proposed facility.

Trade Secret Information

In pages 47-48 of his Memorandum, the ALJ discussed MEC's concern about trade secret information and the possible desire of non-party and non-agency entities to access it. To the best of staff's knowledge, there is no official request before the Commission to deal with this issue. Therefore, staff has no further comment in this area.

Decision Options

As a final decision on Mankato Energy Center's certificate of need application, the Commission could:

1. accept the findings and conclusions of the Administrative Law Judge (as amended by the corrections/clarifications identified by staff, the Applicant, and the Department⁸) and issue a certificate of need for the proposed facility and the transmission line(s) directly associated with the plant that are necessary to interconnect the plant to the transmission system, and, as part of that certification, add that the Environmental Assessment prepared by the EQB staff and the record created adequately address the issues identified by the EQB Chair in the scoping decision;

⁸The individual items, of course, will have to be considered by the Commission for their appropriateness. While at this point staff believes all of the suggested changes are likely to be appropriate, the Commission should identify which of the suggested changes it will accept.

2. decline to issue a certificate of need on the basis that expanding the facility beyond the exempt portion would be an unnecessary and imprudent use of natural gas;
3. decline to issue a certificate of need at this time on the basis that the record needs further development regarding the cost-effectiveness of using a biodiesel and fuel oil blend as a backup fuel when natural gas is unavailable; or
4. make some other decision deemed more appropriate.

If the Commission chooses option 1 above, in the area of modifications of or conditions on the certification, the Commission could:

1. request that the applicant, in its operation of the proposed facility, continue to investigate the technical feasibility and economic viability of the use of a biodiesel blend for those times when the facility does not have access to natural gas as fuel; or
2. make some other decision deemed more appropriate.

Final Analyst's Note: Minn. Rules, part 7849.0210, subp. 3 indicates that the Commission's decision shall not be issued until the Applicant has paid the applicable set fee payments. As of the date of these briefing papers, staff has not confirmed whether the Applicant has submitted all of the required payments.